App. No. 10/009126
Office Action Dated January 10, 2005
Amd. Dated April 11, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listing of claims in the application.

Claims 2-15 are canceled without prejudice or disclaimer.

Claim 1 is amended.

Claim 16 is new.

**Listing of Claims:**

1. (Currently Amended) Process for anticipating ~~and/or preventing~~ a risk of spontaneous ignition and[[/or]] explosion of an explosive atmosphere in ~~a confined or semi-confined~~ an environment ~~chosen from~~ comprising a group consisting of a grain silo, a center for storing coal dust, industrial dusts, animal or plant meals or ~~fertilizers~~ chemical fertilizers or ammonium nitrates, driftways, pipe lines and storage tanks ~~fuel tanks optionally incorporated in a vehicle~~ wherein benzene, cyclohexane, cyclohexene, kerosene, ethane, n-heptane, petroleum spirit, methane, butane or propane is stored in the pipes lines or the storage tanks, the method comprising:

measuring ~~in which~~ a temperature of a mixture and any change over time ~~are measured~~ from a time of creation of said atmosphere at an instant combustible vapors or gases are initially mixed or put into contact with air, ~~and~~

determining a critical moment of spontaneous ignition and/or explosion of the mixture ~~is determined~~ by determining an induction time remaining to go, ~~that is to say~~ including the time elapsed between the creation of said atmosphere and the critical moment beyond which there is a risk of said atmosphere spontaneously igniting and[[/or]] exploding, and

using a means for preventing spontaneous ignition and explosion of said atmosphere when the time elapsed from the moment of creation of said atmosphere approaches the critical moment of spontaneous ignition, wherein the means is engaged manually or automatically.

2-15. (Canceled)

16. (New) Process for anticipating a risk of spontaneous ignition and explosion of an explosive atmosphere in an environment chosen from a group consisting of a grain silo, a center for storing coal dust, industrial dusts, animal or plant meals or chemical fertilizers or ammonium nitrates, driftways and truck, aircraft or boat tanks of hydrocarbons chosen from the group consisting of kerosene, petroleum spirit, methane, butane and propane, the method comprising:

measuring a temperature of a mixture and any change over time from a time of creation of said atmosphere,

determining a critical moment of spontaneous ignition and/or explosion of the mixture by determining an induction time remaining to go, including the time elapsed between the creation of said atmosphere and the critical moment beyond which there is a risk of said atmosphere spontaneously igniting and exploding, and

using a means for preventing spontaneous ignition and explosion of said atmosphere when the time elapsed from the moment of creation of said atmosphere approaches the critical moment of spontaneous ignition, wherein the means is engaged manually or automatically.